identifying at least one characteristic of said data [unit]units, said method comprising the steps of:

receiving a plurality of said data units on a multiple channel data stream, at least some of said data units being received sequentially; and

performing the following steps for each of said received data [unit]units:

(a) storing the received [unit]data units in a data buffer;

(b) decoding the identification portion of the data [unit]units to identify the at least one characteristic of the data [unit]units;

(c) determining whether the data [unit]units should be distributed before or after one or more other of said data units based on the identified characteristic of the data [unit]units; and

(d) transmitting the data [unit]units in an order relative to other of said data units [in accordance with]based on said step of determining.

2. (Amended) The method of claim 1 wherein said step of determining comprises the steps of:

comparing the identification portion of the data [unit]units to predetermined information designating the order of distribution of said data units; and

determining the position of the data [unit]units in an order of distribution of the received data units based on said step of comparing the identification portion.

3. (Amended) The method of claim 1 wherein said step of determining comprises the steps of:

comparing the identification portion of the data [unit]units to stored schedule information designating when each of said data [unit]units is to be distributed; and

determining when the data [unit]units should be distributed based on said schedule information.

2

4. (Amended) The method of claim 1 wherein said step of transmitting comprises the steps of:

[reordering the distribution]changing said transmission order of the received data units based on said step of determining;

outputting the data units to output ports in said [distribution]changed transmission order to distribute the data units in an order different from the order in which they were received.

5. (Amended) A method for routing and distributing data units, each of said data [unit]units having an identification portion and an information content portion, said method using a switch with multiple data ports, a plurality of storage locations for storing and communicating each of said data units to a unique destination address and a controller for controlling said switch and said storage location, said method comprising the steps of:

receiving the data units in an information stream, said stream having said data units separated in the time domain so that said data units are sequentially received by [a]said switch;

processing said data units by decoding the identification portion of each of said data [unit]units to identify the priority of the information content portion of said data [unit]units;

routing each of said data [unit]units to a data port on said switch;

selecting a storage location to store each of said data [unit]units; and

communicating each of said data [unit]units to said selected storage location to prioritize the transmission of each of said data [unit]units.

6. (Amended) The method of claim 5 further comprising:

3

accumulating information about said identification portion of said data units to calculate the total number of data units transmitted over a predetermined time span, said calculated total about said identification portion of said data units being maintained for each said unique destination address, decoded in said step of processing from said identification portion, for said data units passing through said switch over said predetermined time span.

7. (Amended) The method of claim 6 further comprising:

generating a bill from said total number of said data units transmitted over a predetermined time calculated in said step of accumulating information by comparing said accumulated total number of said data units transmitted to [a]said unique destination address with a predetermined billing rate.

8. (Amended) The method of claim 5 further comprising:

determining from said decoded identification portion of said data [unit]units whether said data [unit]units should be distributed to multiple data ports on said switch.

9. (Amended) The method of claim 5 further comprising:

comparing said decoded identification portion of said data [unit]units with a predetermined schedule to determine a re-transmission time for said data [unit]units and determining a data port on said switch for said re-transmission.

10. The method of claim 5 further comprising:

accumulating information about said identification portion of said data units to calculate the total number of data units transmitted over a predetermined time span, said calculated total about said identification portion of said data units being

maintained for each data port on said switch for said data units passing through said switch over said predetermined time span.

11.   The method of claim 10 further comprising:

generating a bill from said total number of data units transmitted over a predetermined time calculated in said step of accumulating information by comparing said accumulated total number of data units transmitted to a data port with a predetermined billing rate.

12. (Amended) A method for routing and distributing data units, each of said data [unit]units having an identification portion and an information content portion, said method using a switch with multiple data ports, a plurality of storage locations for storing and communicating said data units and a controller for controlling said switch and said storage location, said method comprising the steps of:

receiving the data units in an information stream, said stream having said data units separated in the time domain so that said data units are sequentially received by a switch;

processing said data units by decoding the identification portion of each of said data [unit]units to identify the information content portion of said data [unit]units;

comparing the identification portion of said data [unit]units to predetermined timing data to determine a transmission time based on said identification portion of said data [unit]units; and

transmitting said data [unit]units based on said comparing step.

13. (Amended) The method of claim 12 further comprising:

accumulating information about said identification portion of said data units to calculate the total number of data units transmitted over a predetermined time span,

5

said calculated total about said identification portion of said data units being

maintained for each said unique destination address, decoded in said step of processing

from said identification portion, for said data units passing through said switch over

said predetermined time span.

14. (Amended) The method of claim 13 further comprising:

generating a bill from said total number of data units transmitted over a

predetermined time calculated in said step of accumulating information by comparing

said accumulated total number of data units transmitted to [a]said unique destination

address with a predetermined billing rate.

15. (Amended) The method of claim 12 further comprising:

determining from said decoded identification portion of said data [unit]units

whether said data [unit]units should be distributed to multiple data ports on said

switch.

16. (Amended) The method of claim 12 further comprising:

comparing said decoded identification portion of said data [unit]units with a

predetermined schedule to determine a re-transmission time for said data [unit]units

and determining a data port on said switch for said re-transmission.

17. (Amended) A method for routing and distributing data units, each of said

data [unit]units having an identification portion and an information content portion,

said method using a switch with multiple data ports, a plurality of storage locations for

storing and communicating data units and a controller for controlling said switch and

said storage location, said method comprising the steps of:

receiving the data units in an information stream, said stream having said data units separated in the time domain so that said data units are sequentially received by a switch;

processing said data units by decoding the identification portion of each of said data [unit]units to identify the information content portion of said data [unit]units;

comparing said decoded identification portion of each of said data [unit]units to predetermined priority data to determine a transmission priority;

communicating an instruct-to-delay signal to cause a delay in the communication of said data units.

18. (Amended) The method of claim 17 further comprising:

accumulating information about said identification portion of said data units to calculate the total number of data units transmitted over a predetermined time span, said calculated total about said identification portion of said data units being maintained for each said unique destination address, decoded in said step of processing from said identification portion, for said data units passing through said switch over said predetermined time span.

19. (Amended) The method of claim 18 further comprising:

generating a bill from said total number of data units transmitted over a predetermined time calculated in said step of accumulating information by comparing said accumulated total number of data units transmitted to [a]said unique destination address with a predetermined billing rate.

20. (Amended) The method of claim 17 further comprising:

determining from said decoded identification portion of said data [unit]<u>units</u>

whether said data [unit]<u>units</u> should be distributed to multiple data ports on said

switch.

21. (Amended) The method of claim 17 further comprising:

comparing said identification portion of said data [unit]<u>units</u> with a

predetermined schedule to determine a re-transmission time for said data [unit]<u>units</u>

and determining a data port on said switch for said re-transmission.

22.   The method of claim 17 further comprising:

accumulating information about said identification portion of said data units to

calculate the total number of data units transmitted over a predetermined time span,

said calculated total about said identification portion of said data units being

maintained for each data port on said switch for said data units passing through said

switch over said predetermined time span.

23.   The method of claim 22 further comprising:

generating a bill from said total number of data units transmitted over a

predetermined time calculated in said step of accumulating information by comparing

said accumulated total number of data units transmitted to a data port with a

predetermined billing rate.

24. (Amended) A method for routing and distributing data units, said data units

having a first identification portion and a second multimedia information portion using

a switch with multiple data ports, a data buffer and a controller for controlling said

switch comprising the steps of:

receiving the data units from a multiple channel data stream, said multiple

channel data stream having said data units separated in the time domain so that said

data units are sequentially received on a data port on said switch;

processing said data [unit]units by decoding said first portion of said data

[unit]units to identify the type of data in said second multimedia information portion

and to identify [an]a unique destination address that indicates routing information for

said data [unit]units;

assigning a transmission priority to said data [unit]units based on said type of

data in said second multimedia portion of said data [unit]units determined by said step

of processing said data [unit]units by placing said data [unit]units into said data buffer

and;

transmitting said data [unit]units based on said assigned priority determined by

the type of data in said second multimedia information portion of said data [unit]units

to a data port on said switch.

25. (Amended) The method of claim 24 further comprising:

accumulating information about said identification portion of said data units to

calculate the total number of data units transmitted over a predetermined time span,

said calculated total about said identification portion of said data units being

maintained for each said unique destination address, decoded in said step of processing

from said identification portion, for said data units passing through said switch over

said predetermined time span.

26. (Amended) The method of claim 25 further comprising:

generating a bill from said total number of data units transmitted over a

predetermined time calculated in said step of accumulating information by comparing

9

said accumulated total number of data units transmitted to [a]said unique destination address with a predetermined billing rate.

27. (Amended) The method of claim 24 further comprising:

determining from said decoded identification portion of said data [unit]units whether said data [unit]units should be distributed to multiple data ports on said switch.

28. (Amended) The method of claim 24 further comprising:

comparing said identification portion of said data [unit]units with a predetermined schedule to determine a re-transmission time for said data [unit]units and determining a data port on said switch for said re-transmission.

29. (Amended) The method of claim 24 further comprising:

comparing said identification portion of said data [unit]units with a predetermined schedule to determine a re-transmission time for said data [unit]units and determining multiple data ports on said switch for said re-transmission.

30. (Amended) The method of claim 28 further comprising:

verifying said re-transmission by receiving said re-transmitted data [unit]units from said selected data port on said switch and repeating said step of processing said data [unit]units to identify the type of data in said second multimedia information portion and to identify an address that indicated routing information for said data [unit]units.

31.   The method of claim 28 further comprising:

10

receiving a new transmission schedule and changing said predetermined

transmission schedule.

---

32. (Amended) The method of claim 24 further comprising:

receiving a [new] billing rate schedule [and changing said predetermined billing

rate schedule].

33. (Amended) A method for routing and distributing multimedia data, said

multimedia data having a first identification portion and a second multimedia

information portion using a network of switches each with multiple ports and a

controller for controlling said <u>network of switches</u> [switch] comprising the steps of:

receiving the multimedia data at an input on a first switch, said multimedia data

having multimedia signal units separated in the time domain so that said multimedia

data is sequentially received;

processing said multimedia [signal]<u>data units</u> by decoding [said]<u>a</u> first encoded

portion of said multimedia [signal]<u>data units</u> to determine a destination address for

said multimedia [signal]<u>data units</u>;

routing said multimedia [signal]<u>data units</u> to an output port on said <u>network of</u>

<u>switches</u> [switch] based on said processing step;

storing said multimedia [signal]<u>data units</u> in a temporary storage location based

on said routing step that was determined in said processing step;

transmitting said multimedia [signal]<u>data units</u> from said temporary storage

device at an asynchronous time, said asynchronous time determined by decoding said

first encoded portion of said multimedia [signal]<u>data units</u> to determine the type of data

in said second multimedia information portion to a second switch.

34. (Amended) The method of claim 33 further comprising:

11

determining from said decoded identification portion of said data [unit]units whether said data [unit]units should be distributed to multiple data ports on said switch.

35. The method of claim 33 further comprising:

comparing said decoded identification portion of said data [unit]units with a predetermined schedule to determine a re-transmission time for said data [unit]units and determining a data port on said switch for said re-transmission.

36. The method of claim 33 further comprising:

accumulating information about said identification portion of said data units to calculate the total number of data units transmitted over a predetermined time span, said calculated total about said identification portion of said data units being maintained for each data port on said switch for said data units passing through said switch over said predetermined time span.

37. The method of claim 36 further comprising:

generating a bill from said total number of data units transmitted over a predetermined time calculated in said step of accumulating information by comparing said accumulated total number of data units transmitted to a data port with a predetermined billing rate.

38. (Amended) A method for coding, decoding, routing and distributing multimedia data, said multimedia data having a first identification portion and a second multimedia information portion using a multiple port switch and a controller comprising the steps of:

12

receiving [the] multimedia data units from a multiple channel data stream, said

multiple channel data stream having multimedia data units separated in the time

domain so that said multimedia data units have an asynchronous arrival at a data port

on said switch;

processing said multimedia data [unit]units by decoding said first portion of said

multimedia data [unit]units to identify the type of data in said second multimedia

information portion and to identify [an]a unique destination address that indicates

routing information for said multimedia data [unit]units;

storing said multimedia signal in a temporary storage location based on said

routing information determined in said processing step;

processing said multimedia data [unit]units by decoding said second portion of

said multimedia data [unit]units and re-formatting said multimedia data from said

second portion of said multimedia data [unit]units;

re-timing said re-formatted multimedia data units into a synchronous data

stream.

39. (Amended) The method of claim 38 further comprising:

transmitting said re-timed and re-formatted multimedia signal from said storage

in a synchronous data stream, said synchronizing time determined by the data port on

said switch selected by said address decoded from said first portion of said multimedia

data [unit]units in said step of processing.

40. (Amended) The method of claim 38 further comprising:

transmitting said re-timed and re-formatted multimedia signal from said storage

in a synchronous data stream, said synchronizing time determined by comparing said

decoded multimedia identification portion of said multimedia data [unit]units with

predetermined data to determine a re-transmission rate for said multimedia signal.

13

41. (Amended) The method of claim 38 further comprising:

accumulating information from said first identification portion of said multimedia data units to calculate the total number of multimedia data units transmitted over a predetermined time span, said calculated total about said identification portion of said multimedia data units being maintained for each said unique destination address, decoded in said step of processing from said identification portion, for said multimedia data units passing through said switch over said predetermined time span.

42. (Amended) The method of claim 41 further comprising:

generating a bill from said total number of data units transmitted over a predetermined time calculated in said step of accumulating information by comparing said accumulated total number of data units transmitted to [a]said unique destination address with a predetermined billing rate.

43. The method of claim 38 further comprising:

determining from said decoded identification portion of said multimedia data [unit]units whether said multimedia data units should be distributed to multiple data ports on said switch.

44. (Amended) The method of claim 38 further comprising:

comparing said decoded identification portion of said multimedia data [unit]units with a predetermined schedule to determine a re-transmission time for said multimedia data [unit]units and determining a data port on said switch for said re-transmission.

14